

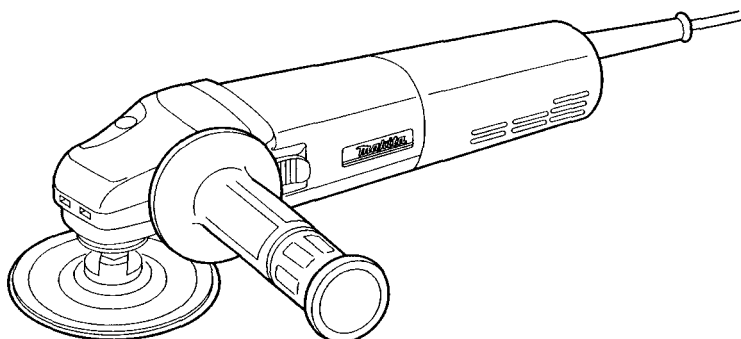


アメリカ

Angle Grinder

115 mm (4-1/2") MODEL 9564CVL

INSTRUCTION MANUAL



**DOUBLE
INSULATION**

SPECIFICATIONS

No load speed (RPM)	Overall length	Net weight	Spindle thread
2,000 — 6,800/min.	311 mm (12-5/16")	1.8 kg (4.0 lbs)	5/8"

* Manufacturer reserves the right to change specifications without notice.

* Note: Specifications may differ from country to country.

WARNING: For your personal safety, READ and UNDERSTAND before using.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

GENERAL SAFETY RULES

USA002-1

(For All Tools)


WARNING! Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

SAVE THESE INSTRUCTIONS

Work Area

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

Electrical Safety

4. **Double Insulated tools are equipped with a polarized plug (one blade is wider than the other.) This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way. Double insulation  eliminates the need for the three wire grounded power cord and grounded power supply system.**
5. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
8. **When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W."** These cords are rated for outdoor use and reduce the risk of electric shock.

Personal Safety

9. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
10. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.

11. **Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
12. **Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
13. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the tool in unexpected situations.
14. **Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

15. **Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
16. **Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
17. **Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
18. **Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
19. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
20. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
21. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
22. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

SERVICE

23. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
24. **When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

Specific Safety Rules

US8038-2

1. **Always use proper guard with grinding wheel.** A guard protects operator from broken wheel fragments.
2. **Accessories must be rated for at least the speed recommended on the tool warning label.** Wheels and other accessories running over rated speed can fly apart and cause injury.
3. **Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
4. **Keep guards in place.**
5. **Use only wheels having a maximum operating speed at least as high as No Load Speed marked on the tool's nameplate.** When using depressed center wheels, be sure to use only fiberglass-reinforced wheels.
6. **Check the backing pad or the wheel carefully for cracks or damage before operation.** Replace cracked or damaged pad or wheel immediately.
7. **Use only flanges specified for this tool.**
8. **Be careful not to damage the spindle, the flange (especially the installing surface) or the lock nut.** Damage to these parts could result in wheel breakage.
9. **Hold the tool firmly.**
10. **Keep hands away from rotating parts.**
11. **Make sure the abrasive disc or the wheel is not contacting the workpiece before the switch is turned on.**
12. **Before using the tool on an actual workpiece, let it run for a while. Watch for vibration or wobbling that could indicate poor installation or a poorly balanced wheel.**
13. **Use the specified surface of the wheel to perform the grinding.**
14. **Watch out for flying sparks.** Hold the tool so that sparks fly away from you and other persons or flammable materials.
15. **Do not leave the tool running.** Operate the tool only when hand-held.
16. **Do not touch the workpiece immediately after operation; it may be extremely hot and could burn your skin.**

SAVE THESE INSTRUCTIONS.

SYMBOLS

The followings show the symbols used for tool.

V volts

A amperes

Hz hertz

~ alternating current

n_0 no load speed



..... Class II Construction

.../min revolutions or reciprocation per minute

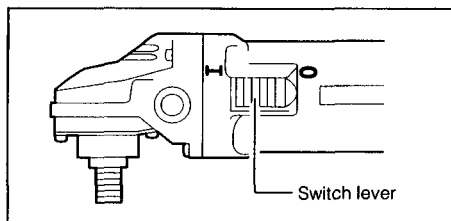
FUNCTIONAL DESCRIPTION

Switch action

CAUTION:

Before plugging in the tool, always check to see that the switch actuates properly and returns to the "OFF" position when the side of the switch lever is depressed.

To start the tool, slide the switch lever toward the "I" position. For continuous operation, press the front of the switch lever to lock it. To stop the tool, press the rear of the switch lever, then slide it toward the "O" position.



Speed adjusting dial

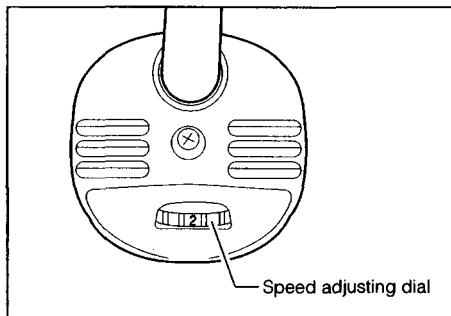
The rotating speed can be changed by turning the speed adjusting dial to a given number setting from 1 to 5.

Higher speed is obtained when the dial is turned in the direction of number 5.

And lower speed is obtained when it is turned in the direction of number 1.

Refer to the table below for the relationship between the number settings on the dial and the approximate rotating speed.

Number	RPM (min)
1	2000
↺	↺
2	3000
↺	↺
3	4500
↺	↺
4	6000
↺	↺
5	6800



CAUTION:

The speed adjusting dial can be turned only as far as 5 and back to 1. Do not force it past 5 or 1, or the speed adjusting function may no longer work.

The tools equipped with electronic function are easy to operate because of the following features.

- Electronic speed control for obtaining constant speed
Possible to get fine finish, because the rotating speed is kept constantly even under the loaded condition.
- Soft start feature
Safety and soft start because of suppressed starting shock.
- Overload protector
When the tool would be employed over the admissible load, it will stop automatically to protect the motor and wheel. When the load will come to the admissible level again, the tool can be started automatically.

ASSEMBLY

IF USED AS A GRINDER

Removing head cover

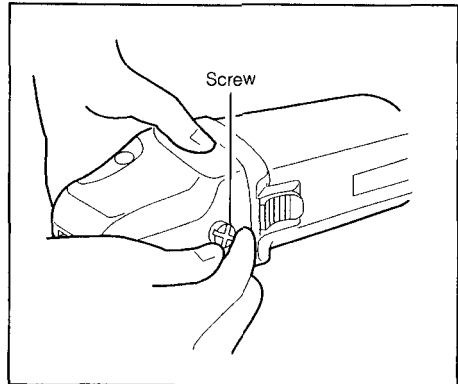
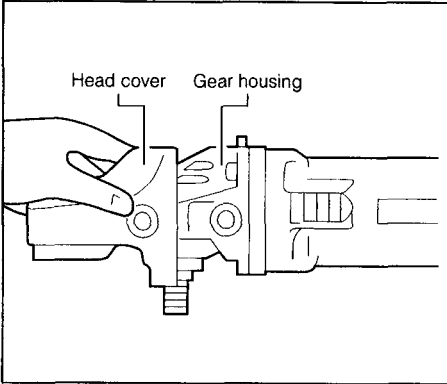
CAUTION:

Always be sure that the tool is switched off and unplugged before removing or installing accessories.

Installing or changing accessories with the tool plugged in could cause serious injury.

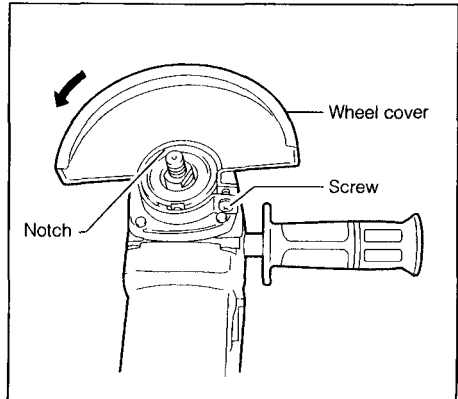
Remove the head cover by loosening the screw.

Pull off the head cover while pulling out its corners.



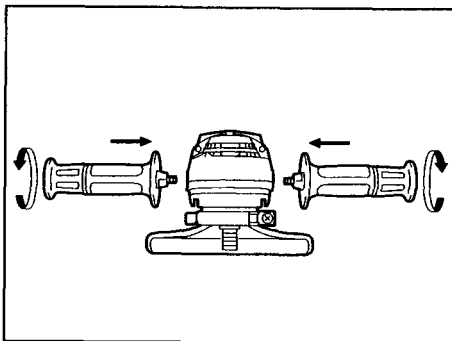
Installing and removing wheel cover

When using a depressed center wheel or an abrasive cut-off wheel, always use a wheel guard. Mount the wheel guard with the tab on the wheel guard band aligned with the notch on the bearing box. Then rotate the wheel guard 180 degrees counterclockwise. Be sure to tighten the screw securely.



Installing side grip (auxiliary handle)

Screw the side grip on the tool securely. The side grip can be installed on either side of the tool, whichever is convenient.

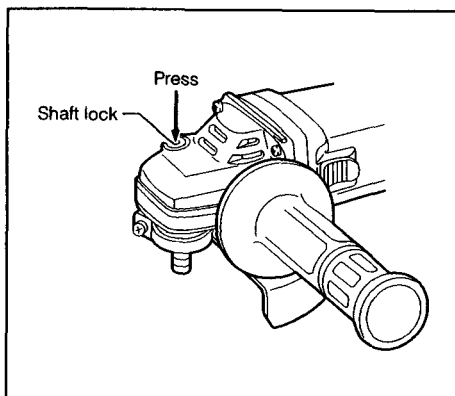


Shaft lock

Press the shaft lock to prevent spindle rotation when installing or removing accessories.

CAUTION:

Never actuate the shaft lock when the spindle is moving. The tool may be damaged.

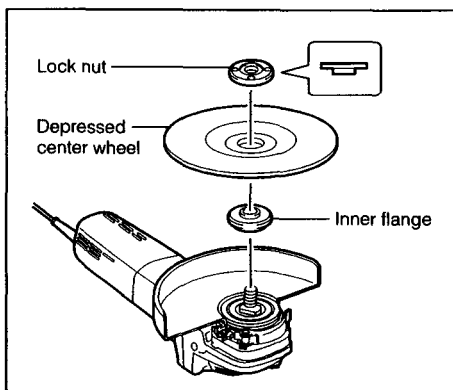


Installing or removing the depressed center wheel

CAUTION:

Always be sure that the tool is switched off and unplugged before installing or removing the wheel.

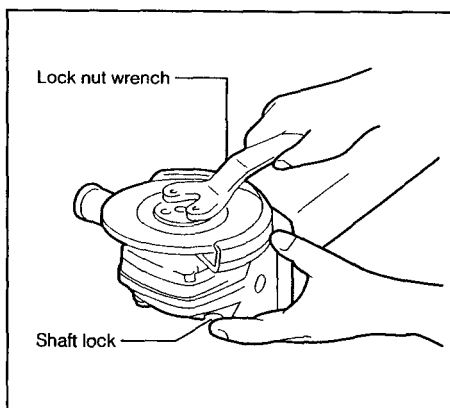
Mount the inner flange onto the spindle. Fit the wheel on over the inner flange and screw the lock nut onto the spindle.



To tighten the lock nut, press the shaft lock firmly so that the spindle cannot revolve, then use the lock nut wrench and securely tighten clockwise.

WARNING:

Only actuate the shaft lock when the spindle is not moving.



IF USED AS A SANDER

Installing side grip (auxiliary handle)

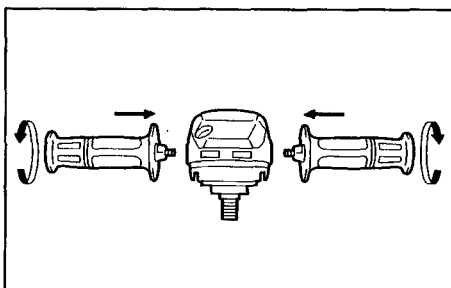
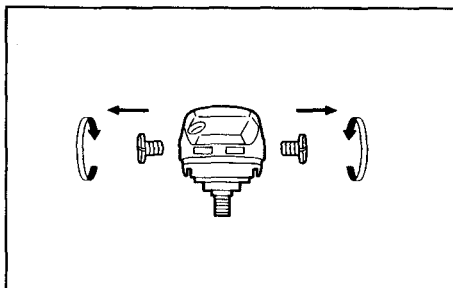
CAUTION:

Always be sure that the tool is switched off and unplugged before installing or removing the side grip.

Remove one of the screws which secure gear housing and head cover.

Screw the side grip on the tool securely. The side grip can be installed on either side of the tool.

Always be sure that the side grip is installed securely.



Installing and removing abrasive disc

CAUTION:

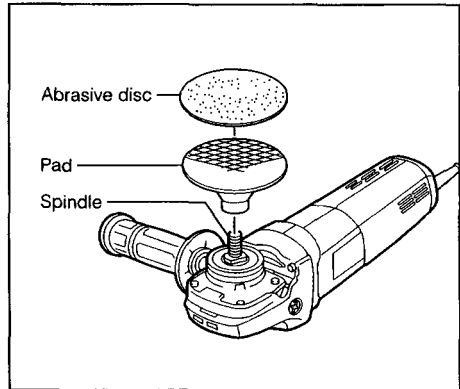
Always be sure that the tool is switched off and unplugged before removing or installing accessories.

Installing abrasive disc

Remove all dirt or foreign matter from the pad.

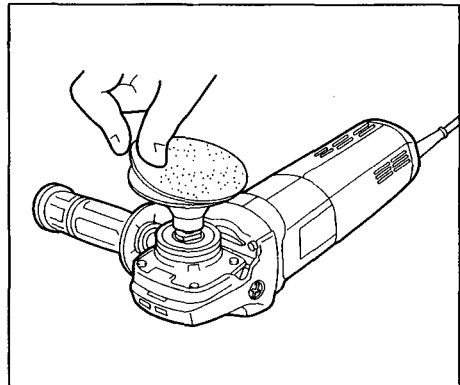
Screw the pad onto the spindle with pressing the shaft lock.

Attach the disc to the pad so carefully that the edges of disc and pad overlap each other without protruding.



Removing abrasive disc

Remove the paper by pulling off its edge from the pad.



OPERATION

Sanding operation

CAUTION:

Always wear safety glasses or a face shield during operation.

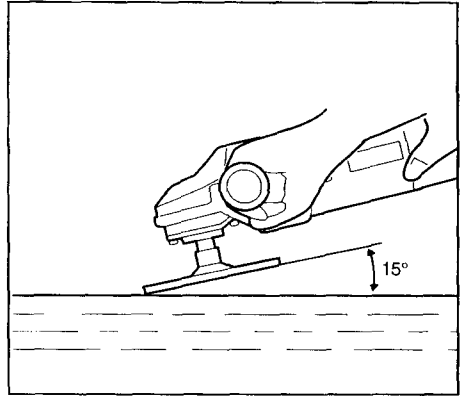
In general, keep the abrasive disc at an angle of about 15° to the workpiece surface.

Apply slight pressure only. Excessive pressure will result in poor performance and premature wear to the abrasive disc.

CAUTION:

Never run the tool without the abrasive disc.

You may seriously damage the pad.



Grinding operation

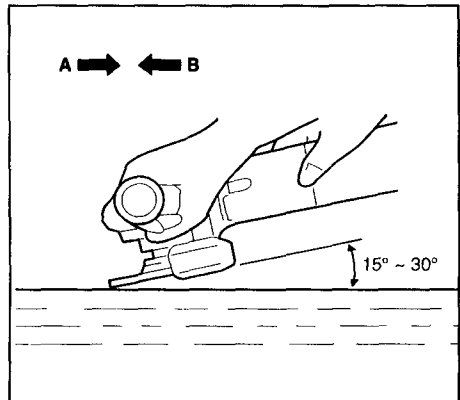
CAUTION:

After operation, always switch off the tool and wait until the wheel has come to a complete stop before putting the tool down.

Hold the tool firmly. Turn the tool on and then apply the wheel or disc to the workpiece.

In general, keep the edge of the wheel or disc at an angle of about $15^\circ - 30^\circ$ to the workpiece surface.

During the break-in period with a new wheel, do not work the grinder in the B direction or it will cut into the workpiece. Once the edge of the wheel has been rounded off by use, the wheel may be worked in both A and B direction.



WARNING:

- It should never be necessary to force the tool. The weight of the tool applied adequate pressure. Forcing and excessive pressure could cause dangerous when wheel breakage.
- Continued use of a worn-out wheel may result in wheel explosion and serious personal injury. Depressed center wheel should not be used after it has been worn down to 75 mm (3") in diameter. Use of the wheel after this point is unsafe and it should be removed from service and rendered unusable by intentional destruction.

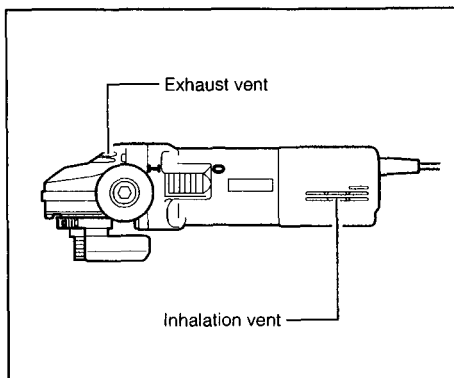
MAINTENANCE

CAUTION:

Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

Repair and maintenance

The tool and its opening vents for cooling air have to be always kept clean. When the foreign matters clog such parts, they have to be taken off.



To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

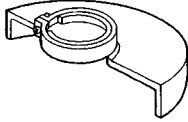
ACCESSORIES

CAUTION:

These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments should be used only in the proper and intended manner.

• Wheel cover

Part No. 165053-7

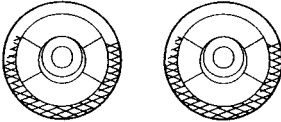


• Inner flange 45

Part No. 224368-2

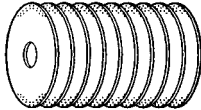


• Depressed center wheels



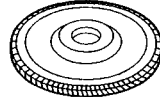
Part No.	Size	Grit	Wheels per pkg.
741423-0-1	4-1/2" x 1/4" x 7/8"	24	1
741423-B			5
741423-0		C24R	1
741426-B			1
741424-B-1		36	1
741424-B			5

• Abrasive discs



Part No.	Diameter	Grit	Qty. per pkg.
794105-A-5	4-1/2"	24	5
794105-A-5		30	
794106A-5		50	
794107-A-5		80	
794108-A-5		120	
794104-B		24	1
794105-B		30	
794106-B		50	
794107-B		80	
794108-B		120	

• Multi-disc



Part No.	Size	Grit
794332-2A	4-1/2" x 5/8" x 7/8"	40
794332-2B		60
794332-2C		80
794332-2D		100

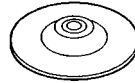
• Lock nut 5/8-45

Part No. 224566-8



• Rubber pad

Part No. 743036-3



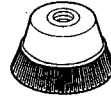
• Lock nut

(For abrasive disc)
Part No. 224517-1



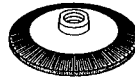
• Wire cup brush 75

Part No. 743205-6



• Wire bevel brush 85

Part No. 743210-A



- **Knot-Type
Wire cup brush**
Part No. 743209-A
Part No. 743209-B



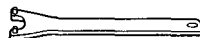
- **Knotted-Twist
Wire cup brush**
Part No. 743212-A



- **Stringer Bead Twist
Wire brush wheel**
Part No. 743213-A
Part No. 743216-A
Part No. 743213-B



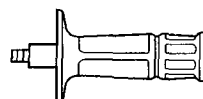
- **Lock nut wrench**
Part No. 782412-6



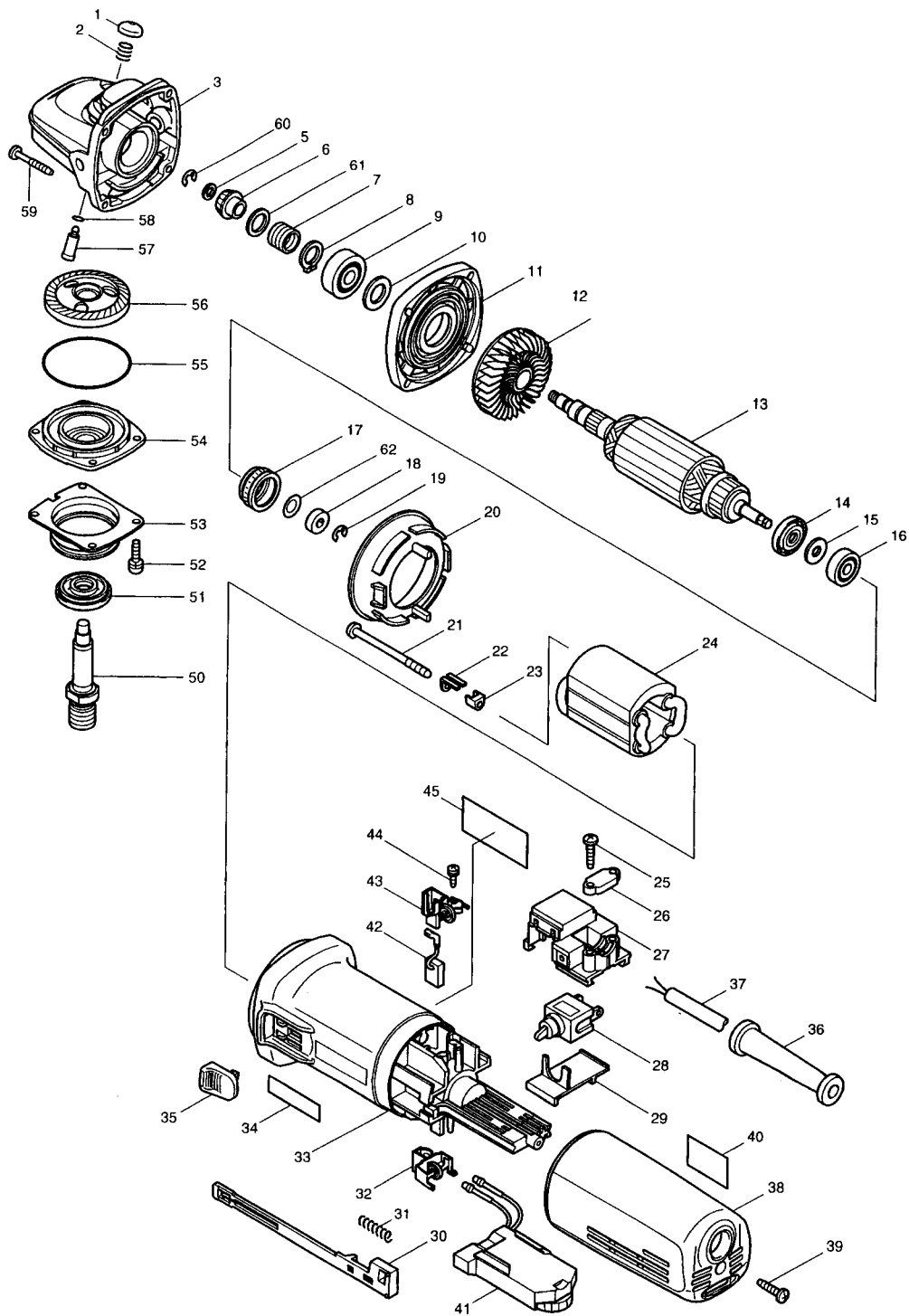
- **Full Cable Twist
Wire brush wheel**
Part No. 743211-A
Part No. 743217-A
Part No. 743214-A



- **Grip**
Part No. 152490-4



ITEM NO.	DESCRIPTION	NO. USED	ITEM NO.	DESCRIPTION	NO. USED
1	PIN CAP	1	31	COMPRESSION SPRING 4	1
2	COMPRESSION SPRING 8	1	32	BRUSH HOLDER	1
3	GEAR HOUSING COMPLETE	1	33	MOTOR HOUSING	1
5	FLAT WASHER 5	1	34	MAKITA LABEL	1
6	SPIRAL BEVEL GEAR 7	1	35	SWITCH KNOB	1
7	LOCK SPRING 12	1	36	CORD GUARD 10	1
8	RETAINING RING S-12	1	37	POWER SUPPLY CORD	1
9	BALL BEARING 6001LLB	1	38	REAR COVER	1
10	FLAT WASHER 12	1	39	TAPPING SCREW 4X18	1
11	GEAR HOUSING COVER	1	40	INDICATION LABEL	1
12	FAN 57	1	41	CONTROLLER	1
13	ARMATURE ASS'Y	1	42	A.C. CARBON BRUSH CB-318	1
14	INSULATION WASHER	1	43	BRUSH HOLDER	1
15	FLAT WASHER 7	1	44	TAPPING SCREW PT3X10	4
16	BALL BEARING 627DDW	1	45	NAME PLATE	1
17	LABYRINTH RUBBER RING 22	1	50	SPINDLE	1
18	MAGNET SLEEVE	1	51	LABYRINTH RING	1
19	STOP RING E-4	1	52	HEX. SOCKET HEAD BOLT M4X16	4
20	BAFFLE PLATE	1	53	WHEEL COVER BASE	1
21	TAPPING SCREW 4X70	2	54	BEARING BOX COMPLETE	1
22	RETAINER	2	55	O RING 52	1
23	INSULATION COVER	2	56	SPIRAL BEVEL GEAR 37	1
24	FIELD	1	57	PIN	1
25	TAPPING SCREW 4X18	2	58	O RING 6	1
26	STRAIN RELIEF	1	59	TAPPING SCREW 4X28	4
27	SWITCH BLOCK	1	60	RETAINING RING S-5	1
28	SWITCH ST115A-40	1	61	FLAT WASHER 12	1
29	COVER	1	62	WAVE WASHER 6	1
30	SWITCH LEVER	1			



WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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